

## **Salt Tectonics in a Synrift and Strongly Tilted Salt Basin, Safi Haute Mer Basin**

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The Safi basin, located offshore Morocco, is a narrow basin, about 100-150 km wide, characterized by Upper Triassic/Lower Jurassic synrift salt. Its conjugate basin, before breakup of the Atlantic occurred, is the hydrocarbon proven area, offshore Nova Scotia in Canada.

The structural study is based on 2D transects and 3D seismic data in water depth of 200–3000m. This induces an average tilt of the seabed surface higher than 5°. In reality, the near-shore part is undergoing an even abrupt tilting. Regional transects display a salt tectonics zoning, which is extensional upslope and contractional downslope. Such a classical segmentation of the margin is in direct agreement with gravitydriven deformation such as in the Angolan African margin. However, salt is here deposited during the rifting and is not necessarily continuous along the basin or nevertheless presented dramatic variations in initial thicknesses as it was deposited in Pre-Mesozoic rifted blocks. The presence to the north of the Mazacan plateau is also a parameter that may have some impacts on the development of the salt structures as it is downslope-curved.

We attempt to link these 3 parameters, strong tilt, segmented initial salt basin and basin contour inherited from the rifting, to explain the salt structure formation in a gravitydriven deformation setting.